AVANZADO

RACHINGENIERIA_VELOCISTA_X.PrjPcb

NOTA: LOS ELEMENTOS CON CRUZ NO SE INSTALAN

S1 S1_2 R1 0 S1 R2 0 S1_1
5V GND

S8 S8_2 R5 0 S8 R6 0 S8_1
5V GND

SW1 S2 GND
5V R3 D1 220

SW2 S3 GND
5V R4 D2 220

SW3 S4 GND

M1 M1A M1B 1 2
M2 M2A M2B 1 2

QTR-8RC QTR-8RC - SENSORES DE LINEA DIGITAL
S8_1 S7 S6 S5 S4 S3 S2 S1_1 GND 5V

S8_1 S6 S4 S2 5V
P2 Header, 5-Pin, Dual row
S7 S5 S1_1 GND

S8_1 S6 S4 S2 5V
P1 Header, 5-Pin, Dual row
S7 S5 S1_1 GND

U1
1 GND OUT2 8 M1A PCB Rule
GND PWM_MA2 2 IN2 ISEN 7 GND
PWM_MA1 3 IN1 OUT1 6 M1B PCB Rule VOUT
5V 4 VREF PAD VM 5
IC MOTOR DRVR UNIPLR 8SO PWRPAD
C1 100nF C2 47uF
GND GND GND

U2
1 GND OUT2 8 M2A PCB Rule
GND PWM_MB1 2 IN2 ISEN 7 GND
PWM_MB2 3 IN1 OUT1 6 M2B PCB Rule VOUT
5V 4 VREF PAD VM 5
IC MOTOR DRVR UNIPLR 8SO PWRPAD
C3 100nF C4 47uF
GND GND GND

ESC
1 VIN X 7
2 GND W 6
PWM_TURBINA 3 S Y 5
4 GND
GND VIN ESC1
EDF1 EDF
1 2 3

5V 5V
R7 R8 1K 1K

U3
S7 30 D12 D13 1 S6
PWM_MB1 29 D11 3V3 2
PWM_MB2 28 D10 REF 3
PWM_MA2 27 D9 A0 4 S2
SW3 26 D8 A1 5 S3
SW2 25 D7 A2 6 S4
PWM_TURBINA 24 D6 A3 7 S5
S8 23 D5 A4 8 I2C1_SDA
SW1 22 D4 A5 9 I2C1_SCL
PWM_MA1 21 D3 A6 10 VOUT_ANALOG
S1 20 D2 A7 11 START
19 5V 12
18 RST RST 13
UART_RX 17 RX GND 14
GND UART_TX 16 TX VIN 15
ARDUINO NANO ATMEGA328 EVAL BRD GND

OLED
4 3 2 1 GND 5V
I2C1_SCL I2C1_SDA
Header, 4-Pin con OLED de 128x64 pixeles I2C

START 5V
1 2 3 4 START GND
MODULO DE ARRANQUE DE COMPETENCIA

NOTA: REMOVER LED D13 DE ARDUINO
ESTE PIN ES USADO PARA LOS SENSORES

MB1 M
MOTOR_1 M
MOTOR_2 M

TR1 TR2
LLANTAS de Caucho Silicona

REG1
Vin GND VOUT
1 2 3 5V
GND

VIN SW1 VCC
BT1 BATTERY
1 2
GND
C5 47uF C6 47uF
GND GND
GND

A/G1
I2C1_SDA
I2C1_SCL
Header, 8-Pin 5V GND

SOLO PARA BASICO (NO AVANZADO)
PONER CABLE ENTRE ENTRADA Y SALIDA
CUANDO NO TIENE ELEVADOR

REG2 VOUT
1 VIIN VOUT 8
2 VIIN VOUT 7
3 GND GND 6
4 GND GND 5
4.5-20V Fine-Adjust Step-Up Voltage Regulator U3V70A
GND

R11 100K
VOUT_ANALOG
R15 10K C7 100nF
GND GND

HC06 o HC05
CONFIGURADO A 115200PBS
MODULE_1
RX TX GND VCC
Header, 2-Pin para Módulo Bluetooth HC-05 or HC06

BLUETOOTH
1 STATE
2 RXD R12
3 TXD R14 50 UART_RX 50
4 GND GND
5 VCC 5V
6 EN

UART_TX
R10 1K
R13 2K GND

Title
Size A3
Number
Revision
Date: 11/4/2019 Sheet of
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Designator	Quantity	Description	Manufacturer
BATTERY	1	CONN HEADER VERT 2POS	Samtec Inc.
BLUETOOTH	1	CONN HDR 6POS 0.1 GOLD PCB	Sullins Connector Solutions
BT1	1	BATERIA LIPO 2s o 3s a 300maH a 2000mAh	JJTRONICS
C1, C3, C7	3	CAP CER 0.1UF 50V X7R 0805	KEMET
C2, C4, C5, C6	4	CAP CER 47UF 25V X5R 1210	Taiyo Yuden
D1, D2	2	LED RED CLEAR 1206 SMD	Visual Communications Company - VCC
EDF	1	EDF35 with 11000kv Motor Assembled	HobbyKing
EDF1, M1, M2	3	TURBINA DE 27mm Brushless, Pines para Motor	
ESC1	1	SPEED CONTROLLER de 6 o mas Amperios	JJTRONICS
MB1	1	Pololu Micro Metal Gearmotor Bracket Pair - Black	POLOLU
MODULE_1	1	Módulo Bluetooth HC-05 or HC06	JJTRONICS
MOTOR_1, MOTOR_2	2	10:1 Micro Metal Gearmotor HPCB 6V -3000rpm	POLOLU
OLED	1	Header, 4-Pin con OLED de 128x64 pixeles I2C	JJTRONICS
QTR-8RC	1	QTR-8RC - SENSORES DE LINEA DIGITAL	JJTRONICS
R2, R6	2	RES SMD 0 OHM 1% 0.4W 0805	Resistencia
R3, R4	2	RES SMD 220 OHM 1% 0.4W 0805	Resistencia
R10	1	RES SMD 1K OHM 0.1% 1/8W 0805	Resistencia
R11	1	RES SMD 100K OHM 0.1% 1/8W 0805	Resistencia
R12, R14	2	RES SMD 50 OHM 0.05% 1/5W 0805	Resistencia
R13	1	RES SMD 2K OHM 0.1% 1/8W 0805	Resistencia
R15	1	RES SMD 10K OHM 1% 0.4W 0805	Resistencia
REG1	1	DC DC CONVERTER 5V OR -5V o 7805	CUI Inc.
REG2	1	4.5-20V Fine-Adjust Step-Up Voltage Regulator U3V70A	POLOLU
S2, S3, S4	3	PULSADOR - SWITCH TACTILE SPST-NO 0.05A 12V	E-Switch
START	1	MODULO DE ARRANQUE DE COMPETENCIA	JJTRONICS
SW1	1	Mini Switch de dos Posiciones	C&K
TR1, TR2	2	LLANTAS de Caucho Silicona	LLANTAS
U1, U2	2	IC MOTOR DRVR UNIPLR 8SO PWRPAD	Texas Instruments
U3	1	ARDUINO NANO ATMEGA328 EVAL BRD	Arduino